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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,591	02/04/2004	John R. Maddison	046124-5314	2336

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WASHINGTON, DC 20005-1209

EXAMINER

ABDELNOUR, AHMED F

ART UNIT	PAPER NUMBER
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2624

MAIL DATE	DELIVERY MODE
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07/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/772,591

Applicant(s)

MADDISON, JOHN R.

Examiner

Farras Abdelnour

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-10 is/are allowed.
- 6) ☒ Claim(s) 11 and 12 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date April 11, 2005
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 03 026 64.8, filed on February 5, 2003.

Specification

2. The abstract of the disclosure is objected to because its length exceeds 150 words. Correction is required. See MPEP § 608.01(b).

Claim Objections - 37 CFR 1.75(d)(1)

3. The following is a quotation of 37 CFR 1.75(d)(1):

The claim or claims must conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description.

4. Claim 11 is objected to under 37 CFR 1.75(d)(1), as failing to conform to the invention as set forth in the remainder of the specification. Claim 11 recites "One or more readable storage devices" and "one or more processors." The specification only discloses "any conventional computer having a processor and memory (paragraph [0025])." Therefore, the specification fails to provide support for a plurality of storage devices coupled to a plurality of processors. Because claim 11 is an original claim, the examiner suggests adding the subject matter recited in the preamble of claim 11 back to the specification without adding new matter.

Claim Objections - 37 CFR 1.75(a)

5. The following is a quotation of 37 CFR 1.75(a):

The specification must conclude with a claim particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention or discovery.

6. Claim 11 is objected to under 37 CFR 1.75(a), as failing to particularly point out and distinctly claim the subject matter which application regards as his invention or discovery. The elements "the microscope," "the low magnification image," and "said position" lack antecedent basis in the claim. The examiner suggests that the preamble of claim 11 be amended to provide antecedent basis, similar to claim 1.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se, and as such are nonstatutory natural phenomena. O'Reilly, 56 U.S. (15 How.) at 112-14. Moreover, it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in Sec. 101.

... a signal does not fall within one of the four statutory classes of Sec. 101.

... signal claims are ineligible for patent protection because they do not fall within any of the four statutory classes of Sec. 101.

8. Claims 11 and 12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 11 and 12 are drawn to functional descriptive material recorded on a processor/computer readable medium. Normally, the claim would be statutory. However, the specification, at page 10, paragraph [0037], defines the claimed computer readable medium as encompassing statutory media such as a "ROM", "hard drive", "optical drive", etc, ("Such a computer readable medium may be a disk or other data storage device") as well as ***non-statutory*** subject matter such as a "carrier wave."

A "carrier wave" embodying functional descriptive material is neither a process nor a product (i.e., a tangible "thing") and therefore does not fall within one of the four statutory classes of § 101. Rather, a "carrier wave" is a form of energy, in the absence of any physical structure or tangible material.

Because the full scope of the claim as properly read in light of the disclosure encompasses non-statutory subject matter, the claim as a whole is non-statutory. The examiner suggests amending the claim to include the disclosed tangible computer readable media, while at the same time excluding the intangible media such as signals, carrier waves, etc. Any amendment to the claim should be commensurate with its corresponding disclosure.

Allowable Subject Matter

9. Claims 1 through 10 are allowed.
10. Claim 11 and 12 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 101, set forth in this Office action.
11. The following is a statement of reasons for the indication of allowable subject matter: Regarding claim 1, Graham *et al.* US 4153438 ("Automated microscopy system and method for locating and re-locating objects in an image") teaches a method for determining a position of an area of an object within said object, wherein an image of said area of said object is contained within a field of view of a microscope ("The present invention is directed to a system for automatically locating and re-locating objects-of-interest in an image which has one or more objects against a background," column 2, line 17). Graham does not explicitly specify low magnification image of the object. Graham does not teach processing the high magnification image data to reduce the resolution thereof. Additionally, while Graham does not compare the processed high magnification image data with portions of the low magnification image data, it does teach automatically identifying objects of interest in an image as well as determining their locations ("In yet another variation, in addition to the feature and pattern portion, the object marker may also generate a coordinate portion for the marker signal, representative of the location within the image of the identified object-of-interest," column 8, line 6).

Uga US 4757550 ("Automatic accurate alignment system") teaches a method for determining a position of an area of an object within said object, wherein an image of

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said area of said object is contained within a field of view of a microscope ("According to this invention, there is provided an automatic accurate alignment system for positioning at a required position an object to be worked which has a certain pattern on its surface," column 2, line 38). Uga does not explicitly teach image data representing a low magnification image of the complete object is available ("camera means for taking at least a part of the image of the surface of the object held on the holding means and outputting analog signals showing the densities of x-y matrix arrayed pixels," column 2, line 44). Uga acquires high magnification image data representing an image of the field of view of the microscope ("and thereafter performing high magnification pattern matching with respect to an image at a relatively high magnification of the surface of the object to be worked," column 2, line 27). Uga does not teach processing the high magnification image data to reduce the resolution thereof. Additionally, while Uga does not teach comparing the processed high magnification image data with portions of the low magnification image data, it does teach comparing images of similar magnification, ("pattern matching means for performing low magnification pattern matching for detecting the same pattern as the low magnification key pattern in the image projected to the camera means at the relatively low magnification and high magnification pattern matching for detecting the same pattern as the high magnification key pattern in the image projected to the camera means at the relatively high magnification on the basis of the signals stored in the image frame memory and the signals stored in the key pattern memory," column 2, line 67). Uga teaches determining said position based on the results of said comparison as applied to image of same magnification, but does not

teach pattern matching of reduced-resolution high magnification image data with portions of the low magnification image data ("pattern matching means for performing low magnification pattern matching for detecting the same pattern as the low magnification key pattern in the image projected to the camera means at the relatively low magnification and high magnification pattern matching for detecting the same pattern as the high magnification key pattern in the image projected to the camera means at the relatively high magnification on the basis of the signals stored in the image frame memory and the signals stored in the key pattern memory," page 2, line 67).

Bacus *et al.* US 2002/0061127 A1 ("Apparatus for remote control of a microscope") teaches acquiring on a computer screen or window images of a specimen at different magnifications as selected by a user. Further, the user may receive on the screen a low magnification, reconstructed image of the entire specimen to aid the person in interactively selecting points of interest on the specimen. The microscope further provides to the viewer a reconstructed, digitized and magnified image of the entire specimen. The user is capable of interactively selecting points of interest from a low-resolution display of the image.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farras Abdelnour whose telephone number is 571-270-1806. The examiner can normally be reached on Mon. - Thurs. 7:30 - 17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian P. Werner can be reached on 571-272-7401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Farras Abdelnour

/Brian P. Werner/
Supervisory Patent Examiner (SPE), Art Unit 2624A